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5   associating each data value of the plurality of data values with one
6   of a plurality of geometric shapes according to a predetermined set of rules;

7   placing said one of the plurality of geometric shapes associated
8   with each data value of the plurality of data values on the grid; and

9   displaying visual and geometric information placed on the grid to a
10 user in graphical form.

1   2.   (Amended) A method for visualizing data arrays provided
2   in the form of a plurality of data values, said method comprising the steps of:

3   extracting a plurality of data values associated with a mathematical
4   matrix to generate a grid based on the plurality of data values;

5   identifying one of a plurality of numerical attributes associated
6   with each data value of the plurality of data values;

7   associating each numerical attribute with one of a plurality of
8   visual attributes;

9   associating each data value of the plurality of data values with one
10 of a plurality of geometric shapes each having one of the plurality of visual
11 attributes, which is consistent with the data value, according to a predetermined
12 set of rules;

13   placing said one of the plurality of geometric shapes associated
14 with each data value of the plurality of data values on the grid; and

15   displaying visual and geometric information placed on the grid to a
16 user in graphical form.

1   4.   (Amended) The method according to claim 1, wherein the
2   data arrays of the plurality of data values are the data arrays of conductance
3   matrices.

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1   5.   (Amended) An article of manufacture comprising a
2   computer usable medium having computer readable program code means
3   embodied therein for visualizing data arrays provided in the form of a plurality
4   of data values, the computer readable program code means in said article of
5   manufacture comprising computer readable program code means for causing a
6   computer to effect:

7   extracting a plurality of data values associated with a mathematical
8   matrix to generate a grid based on the plurality of data values;

9   associating each data value of the plurality of data values with one
10   of a plurality of geometric shapes according to a predetermined set of rules;

11   placing said one of the plurality of geometric shapes associated
12   with each data value of the plurality of data values on the grid; and

13   displaying visual and geometric information placed on the grid to a
14   user in graphical form.

1   6.   (Amended) An article of manufacture comprising a
2   computer usable medium having computer readable program code means
3   embodied therein for visualizing data arrays provided in the form of a plurality
4   of data values, the computer readable program code means in said article of
5   manufacture comprising computer readable program code means for causing a
6   computer to effect:

7   extracting a plurality of data values associated with a mathematical
8   matrix to generate a grid based on the plurality of data values;

9   identifying one of a plurality of numerical attributes associated
10   with each data value of the plurality of data values;

11   associating each numerical attribute with one of a plurality of
12   visual attributes;

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13   associating each data value of the plurality of data values with one
14   of a plurality of geometric shapes each having one of the plurality of visual
15   attributes, which is consistent with the data value, according to a predetermined
16   set of rules;

17   placing said one of the plurality of geometric shapes associated
18   with each data value of the plurality of data values on the grid; and

19   displaying visual and geometric information placed on the grid to a
20   user in graphical form.

1   8.   (Amended) The article of manufacture according to claim
2   5, wherein the data arrays of the plurality of data values are the data arrays of
3   conductance matrices.

1   9.   (Amended) A computer program product comprising a
2   computer usable medium having computer readable program code means
3   embodied therein for causing visualization of data arrays provided in the form of
4   a plurality of data values, the computer readable program code means in said
5   computer program product comprising computer readable program code means
6   for causing a computer to effect:

7   extracting a plurality of data values associated with a mathematical
8   matrix to generate a grid based on the plurality of data values;

9   associating each data value of the plurality of data values with one
10   of a plurality of geometric shapes according to a predetermined set of rules;

11   placing said one of the plurality of geometric shapes associated
12   with each data value of the plurality of data values on the grid; and

13   displaying visual and geometric information placed on the grid to a
14   user in graphical form.

1   10.   (Amended) A computer program product comprising a
2   computer usable medium having computer readable program code means

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3   embodied therein for causing visualization of data arrays provided in the form of
4   a plurality of data values, the computer readable program code means in said
5   computer program product comprising computer readable program code means
6   for causing a computer to effect:

7   extracting a plurality of data values associated with a mathematical
8   matrix to generate a grid based on the plurality of data values;

9   identifying one of a plurality of numerical attributes associated
10   with each data value of the plurality of data values;

11   associating each numerical attribute with one of a plurality of
12   visual attributes;

13   associating each data value of the plurality of data values with one
14   of a plurality of geometric shapes each having one of the plurality of visual
15   attributes, which is consistent with the data value, according to a predetermined
16   set of rules;

17   placing said one of the plurality of geometric shapes associated
18   with each data value of the plurality of data values on the grid; and

19   displaying visual and geometric information placed on the grid to a
20   user in graphical form.

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1   12.   (Amended) The product according to claim 9, wherein the
2   data arrays of the plurality of data values are the data arrays of conductance
3   matrices.

1   13.   (Amended) A storage device readable by machine, tangibly
2   embodying a program of instructions executable by the machine to perform a
3   method for visualizing data arrays provided in the form of a plurality of data
4   values, said method comprising the steps of:

5   extracting a plurality of data values associated with a mathematical
6   matrix to generate a grid based on the plurality of data values;

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7   associating each data value of the plurality of data values with one
8   of a plurality of geometric shapes according to a predetermined set of rules;

9   placing said one of the plurality of geometric shapes associated
10   with each data value of the plurality of data values on the grid; and

11   displaying visual and geometric information placed on the grid to a
12   user in graphical form..

1   14.   (Amended) A storage device readable by a machine,
2   tangibly embodying a program of instructions executable by the machine to
3   perform a method for visualizing data arrays provided in the form of a plurality
4   of data values, said method comprising the steps of:

5   extracting a plurality of data values associated with a mathematical
6   matrix to generate a grid based on the plurality of data values;

7   identifying one of a plurality of numerical attributes associated
8   with each data value of the plurality of data values;

9   associating each numerical attribute with one of a plurality of
10   visual attributes;

11   associating each data value of the plurality of data values with one
12   of a plurality of geometric shapes each having one of the plurality of visual
13   attributes, which is consistent with the data value, according to a predetermined
14   set of rules;

15   placing said one of the plurality of geometric shapes associated
16   with each data value of the plurality of data values on the grid; and

17   displaying visual and geometric information placed on the grid to a
18   user in graphical form.

1   16.   (Amended) The device according to claim 13, wherein the
2   data array of the plurality of data values are the data arrays of conductance
3   matrices.

1   17.   (Newly Added) The method according to claim 1, wherein
2   the data arrays of the plurality of data values are the data arrays of mathematical
3   models of systems.

1   18.   (Newly Added) The article of manufacture according to
2   claim 5, wherein the data arrays of the plurality of data values are the data
3   arrays of mathematical models of systems.

1   19.   (Newly Added) The product according to claim 9, wherein
2   the data arrays of the plurality of data values are the data arrays of mathematical
3   models of systems.

1   20.   (New Added) The device according to claim 13, wherein
2   the data array of the plurality of data values are the data arrays of mathematical
3   models of systems.